

What is claimed is:

1. An antenna diversity receiver comprising:

an antenna selective switching means for coupling one of a plurality of antennas to a RF receiver input; and

a multipath detector for controlling said antenna selective switching means including a switching disabling means for automatically disabling said switching means when the signal delay between the occurrence of multipath distortion in a RF reception signal and said switching means coupling one of a plurality of antennas exceeds a predetermined critical signal delay value.

2. The antenna diversity receiver according to claim 1, wherein an adjacent

channel detector is coupled to a bandwidth variable intermediate frequency (IF) circuit, said predetermined critical signal delay value defining a critical bandwidth for said

bandwidth variable IF circuit, said switching means being automatically disabled when the bandwidth of said bandwidth variable IF circuit is smaller than said critical

bandwidth.

3. The antenna diversity receiver according to claim 2, further comprising a

threshold circuit coupled between an output of the adjacent channel detector and a control

input of the switching disabling means for comparing the output signal of the adjacent
4 channel detector with a threshold bandwidth value corresponding to said critical
bandwidth and for supplying a switching disabling control signal to the switching
6 disabling means when said output signal of the adjacent channel detector effectuates a
bandwidth smaller than said threshold bandwidth value.

4. The antenna diversity receiver according to claim 2, which is provided
2 with a fixed timer circuit introducing a fixed switching disabling period following each
antenna switching action wherein the bandwidth variable intermediate frequency (IF)
4 circuit effects a signal delay at said critical bandwidth corresponding to said fixed
switching disabling period.

5. The antenna diversity receiver according to claim 3 wherein said threshold
2 bandwidth value of the IF selectivity bandwidth is substantially within the range between
40 and 50 KHz.

6. The antenna diversity receiver according to claim 2 wherein the adjacent
2 channel detector is provided with a multiplex input coupled to an output of the
demodulator for detecting adjacent channel reception at the occurrence of both an
4 amplitude variation in the IF signal level and distortion components in the demodulator

output signal.

7. An antenna diversity receiver according to claim 1 wherein the plurality of
2 antennas includes an antenna for receiving radio broadcast RF signals and an antenna for
receiving telecommunication RF signals.

8. An antenna diversity receiver which detects a RF reception signal
2 comprising:
a RF receiver with an input;
4 an antenna selective switching circuit which couples one of a plurality of antennas
to the input of the RF receiver; and
6 a multipath detector coupled to the antenna selective switching circuit, the
detector including a switching disabling circuit which automatically disables the
8 switching circuit when the signal delay between the occurrence of multipath in the RF
reception signal and the coupling of a plurality of antennas to the input of the RF receiver
10 exceeds a predetermined critical signal delay value.

9. The antenna diversity receiver according to claim 8 further comprising:
2 an adjacent channel detector;
a bandwidth variable intermediate frequency (IF) circuit coupled to the adjacent

4 channel detector wherein the predetermined critical signal delay value defines a critical
bandwidth for the bandwidth variable IF circuit, and wherein the switching circuit is
6 automatically disabled when the bandwidth of the bandwidth variable IF circuit is smaller
than the critical bandwidth.

10. The antenna diversity receiver according to claim 9, further comprising a
2 threshold circuit coupled between an output of the adjacent channel detector and a control
input of the switching disabling circuit for comparing the output signal of the adjacent
4 channel detector with a threshold bandwidth value corresponding to the critical
bandwidth, wherein the threshold circuit supplies a switching disabling control signal to
6 the switching disabling circuit when the output signal of the adjacent channel detector
effectuates a bandwidth smaller than the threshold bandwidth value.

11. The antenna diversity receiver according to claim 9, further comprising a
2 fixed timer circuit introducing a fixed switching disabling period following each antenna
switching action wherein the bandwidth variable intermediate frequency (IF) circuit
4 effects a signal delay at the critical bandwidth corresponding to the fixed switching
disabling period.

12. The antenna diversity receiver according to claim 10 wherein the threshold

bandwidth value of the IF selectivity bandwidth is substantially within the range between 40 and 50 KHz.

13. The antenna diversity receiver according to claim 9 wherein the adjacent channel detector includes a multiplex input coupled to an output of the demodulator for detecting adjacent channel reception at the occurrence of both an amplitude variation in the IF signal level and distortion components in the demodulator output signal.

14. An antenna diversity receiver according to claim 8 wherein the plurality of antennas includes an antenna for receiving radio broadcast RF signals and an antenna for receiving telecommunication RF signals.